

Work Order ID- 56618

Tuesday, March 02, 2010 11:16:04 AM

Page 1

Item ID: D3391-023

Accept

Setup Start

Revision ID:

Stop

Item Name: Mid Tube Assembly

Start Date: 3/3/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 3/24/2010 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan: MEDate: 10-3-2

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D3391

Rev H

100

0.00



Skid tubes

Skid tubes

Memo

0.00

Skid tubes

1-Cut tube to finish length as per Dwg D3391

2-Identify as D3391-023

3-Drill pilot holes using DT8796 (Do not drill "B" holes) and drill only 1 fwd saddle hole on one side only as per Dwg D3391

4-Open saddles and GHW holes to Ø0.375" except for fwd saddle hole of detail "J"

5-Remove .030" from Fwd indexing Ridge as per Dwg D3391

6-Remove indexing ridge on Fwd & Aft end of skid tube as per Dwg D3391

7-Deburr

8-Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.250" holes with paint marker,

9-Open wearplate holes of D3391-023 assembly detail section G-G to Ø0.250" (14 holes) as per Dwg D3391 and 2 holes in section Detail "J", do not open wearplate holes of section "J"

10-Open wearplate holes of D3391-023 assembly detail section H-H to Ø0.297" (20 holes) as per Dwg D3391

M 10/3/3

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

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Run HoursDraw
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QtyReject
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Stamp

11-Open .375" holes to .438" ***do not open fwd saddle holes***

12-Locate D3391-021 in D3391-023 at 9.00" (see view z-z)

13- Transfer drill one fwd saddle hole only to .188" dia, transfer drill all remaining fwd saddle holes using DT 8149 locating from previously drill .188" dia hole, using t-pins and clicos to ensure perfect allignment, open up previously tranfer drilled pilot holes in D3391-023/-021 to 0.438" dia. in D3391-021

14- Transfer drill 2 wearplate holes into D3391-021 using DT8217, locating from two previously drilled holes, drill remaining wearplate holes into D3391-021.

15- Locating from two fwd wearplate holes drilol remaining 6 wearplte holes in D3391-021 using DT8937

16- Open 2 fwd wearplate holes in D3391-023 to .250" dia.

17- counterbore two aft wearplate holes in D3391-021 as per dwg

18- Open 12 wearplate holes in D3391-021 to 0.297" dia.

19-Deburr and blow out all chips from inside tube

M10/3/3

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QtyReject
NumberInsp.
Stamp

110



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

8 dln/3



Memo

0.00

120



HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

DP 10-3-3

Memo

0.00

130



QC

Quality Control

QC3- Inspect Part Finish

0.00

1 11/03/14

Memo

0.00

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Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Draw Number | Draw Rev. | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|----------------|--------------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|----------------|--------------|--------------|---------------|---------------|------------------|----------------|

140

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Open float bag holes as per dwg
2-C'sink float bag holes as per dwg
3- Prepare tube for welding
4-Bond web in place as per Dwg D3391 & QSI 015.
Adhere for 12 hours)
A/R Sikaflex exp: M112429
batch#: 101312

150

0.00



QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

0.00

160

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Weld crossbolt spacer as per dwg D3391 & QSI 004
2-grind weld flush

A/R M113207

BE 10/03/08



| W/O: | | WORK ORDER CHANGES | | | | | |
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Cust Item ID:

Required Date: 3/24/2010 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

170

QC10- Inspect visual per QSI004- ground welds

0.00

8:03/09



QC

Memo

0.00

Quality Control

180

QC5- Inspect part completeness to step on W/O

0.00

8:03/09



QC

Memo

0.00

Quality Control

PTG =>

190

White Gloss(Ref.4.3.5.1) per QSI005 4.3-Alum

0.00

M114841



Powdercoat

Memo

0.00

Powder Coating

START TIME: 8:40
OVEN TEMPERATURE: 3200
FINISH TIME: 9:10

① 10-8-31

| W/O: 56618 | | WORK ORDER CHANGES | | | | | |
|------------|-------|---|----|----------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| 10/08/30 | 181.1 | Reallocate + pressure wash As per PAR-043 | JM | 10/08/30 | 1 | | |
| | | | | | | | |

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Work Order ID 56618

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Item ID: D3391-023

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Setup Start



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Cust Item ID:

Required Date: 3/24/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
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Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

200



QC

Quality Control

QC3- Inspect Part Finish

0.00

⇒ 21 10/09/01

1 0

Memo

0.00

210



Skidtubes

Skidtubes

Skidtubes

0.00

0.00

⇒ 21 10/09/01

1 0

Memo

1- insert D3391-021 into D3391-23

2- insert T-pins into first and third fwd saddle holes

3- ON FIRST SIDE ONLY drill out 2nd and forth fwd saddles holes to 0.500" as per DSI 9364

4- remove T-pins and locate DT9415 from first and third crossbolt hole using T-pins and clekos

5- ON 2ND SIDE ONLY ream out 2nd and forth saddle hole to 0.499". Remove DT9415

6- deburr, re-alodine and blow out chips

7- press fit D3591-1 spacers using DT9416 starting from 0.500" side

| W/O: | | WORK ORDER CHANGES | | | | | |
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NOTE: Date & initial all entries

Work Order ID 56618

Tuesday, March 02, 2010 11:16:04 AM



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Item ID: D3391-023

Accept



Setup Start



Revision ID:

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Item Name: Mid Tube Assembly

Start Date: 3/3/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 3/24/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

220



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

ml 10 02 01 (1)

230



HandFinish

Hand Finishing

HandFinishing

0.00

⇒ 24 10/09/01

0.00

Memo

Install Inserts as per Dwg

1 0

240



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

ml 10 02 01 (1)

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Work Order ID 56618

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Item ID: D3391-023

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Setup Start



Revision ID:

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Item Name: Mid Tube Assembly

Start Date: 3/3/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 3/24/2010 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop

Sequence ID/
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DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

250

Identify as per dwg & Stock Location: W/O 61474

Packaging

Memo

0.00

Packaging

ml 10 09 01 (1)

260

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/09/02 mf
10-9-01

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
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NOTE: Date & initial all entries

Picklist Print

Tuesday, March 02, 2010 11:16:03 AM

Page 1

Work Order ID: 56618

Parent Item: D3391-023

Parent Item Name: Mid Tube Assembly

Start Date: 3/3/2010

Required Date: 3/24/2010

Comments: IPP A 05.10.20 New Issue
IPP B 06.02.10 ECN773 dwg rev.D
IPP C 07.03.20 rev F dwg
IPP D 07.03.28 re-format

KJ/EC
EC
EC
EC

Start Qty: 1.00

Required Qty: 1.00

D2500-1-100

Manufactured No

100

Each

134.0000

1.0000

Skidtube Extrusion

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

If

87

50251

87

Main Warehouse

ST

47

37065

47

D3391-021

Manufactured No

100

Each

0.0000

1.0000

Fwd Tube Assembly

D3389-1

Manufactured No

140

Each

2.0000

1.0000

Web

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

2

48244

1

56510

1

B-56624

11/01/3724

10-3-3

4/01/3/3

| W/O: | | WORK ORDER CHANGES | | | | | |
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Picklist Print

Tuesday, March 02, 2010 11:16:03 AM

Work Order ID: 56618



Parent Item: D3391-023



Parent Item Name: Mid Tube Assembly

Start Date: 3/3/2010

Required Date: 3/24/2010

Comments: IPP A 05.10.20 New Issue
IPP B 06.02.10 ECN773 dwg rev.D
IPP C 07.03.20 rev F dwg
IPP D 07.03.28 re-format

KJ/EC
EC
EC
EC

Start Qty: 1.00

Required Qty: 1.00

D3681-1



Spacer

Manufactured No 160 Each 39.0000 5.0000



Warehouse Loc Qty Loc Code
Location

Main Warehouse

LG 37

51920 20

52898 17

Main Warehouse

ST 2

- 47123 2

D3591-1



Bushing

Manufactured No 210 Each 37.0000 2.0000



Warehouse Loc Qty Loc Code
Location

Main Warehouse

ST 37

46105 29

47121 8

1357350

x2 yk 10/09/01

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IPP B 06.02.10 ECN773 dwg rev.D
IPP C 07.03.20 rev F dwg
IPP D 07.03.28 re-format

KJ/EC
EC
EC
EC

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130

Purchased

No

230

Each

1,498.000 22.0000



Insert

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

1498

110511

1498

1114723

x22 3/10/09/09

Tuesday, March 02, 2010 11:16:03 AM

Shop Packet Print

Page 3

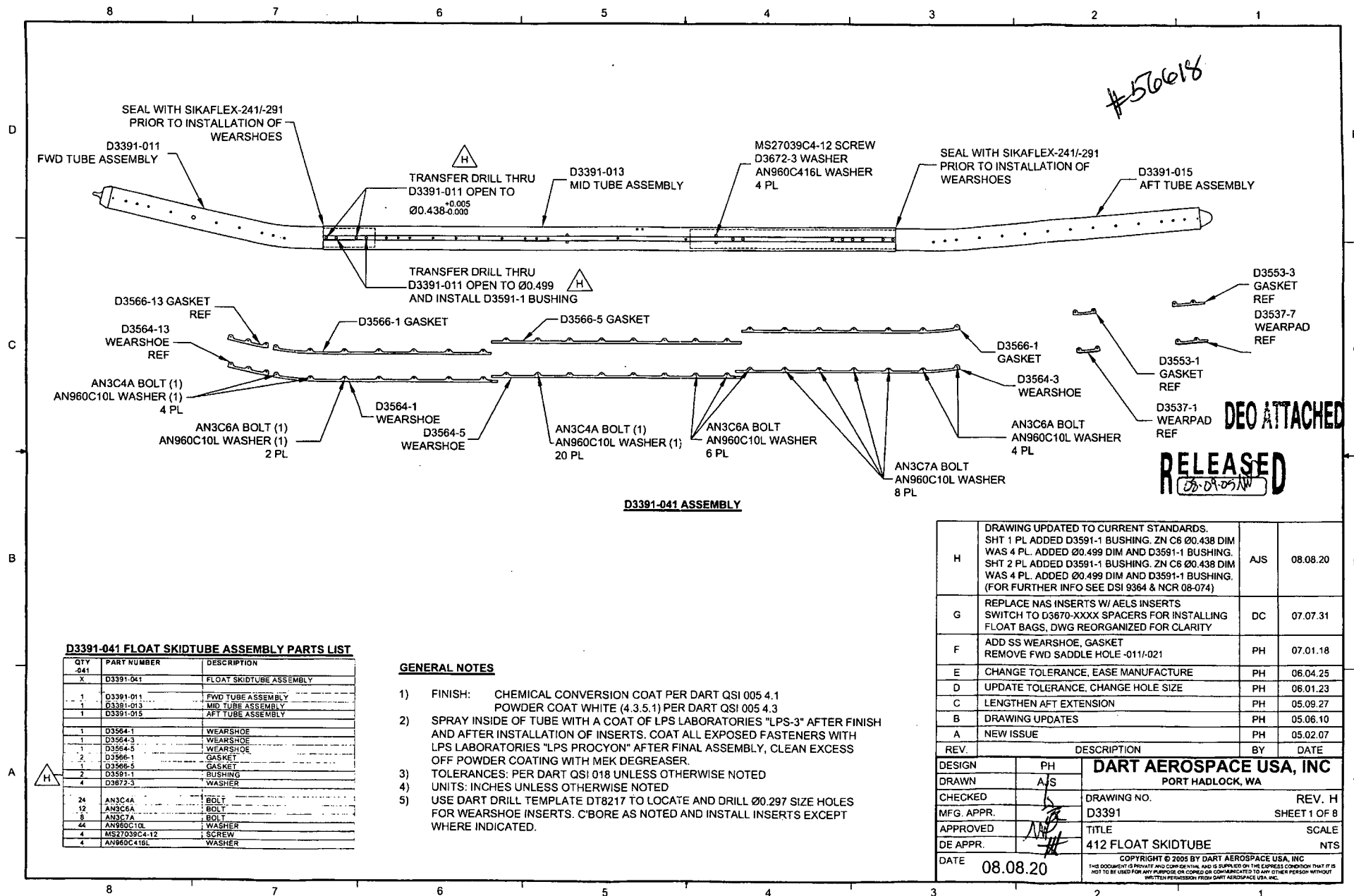
| W/O: | | WORK ORDER CHANGES | | | | | |
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NOTE: Date & initial all entries



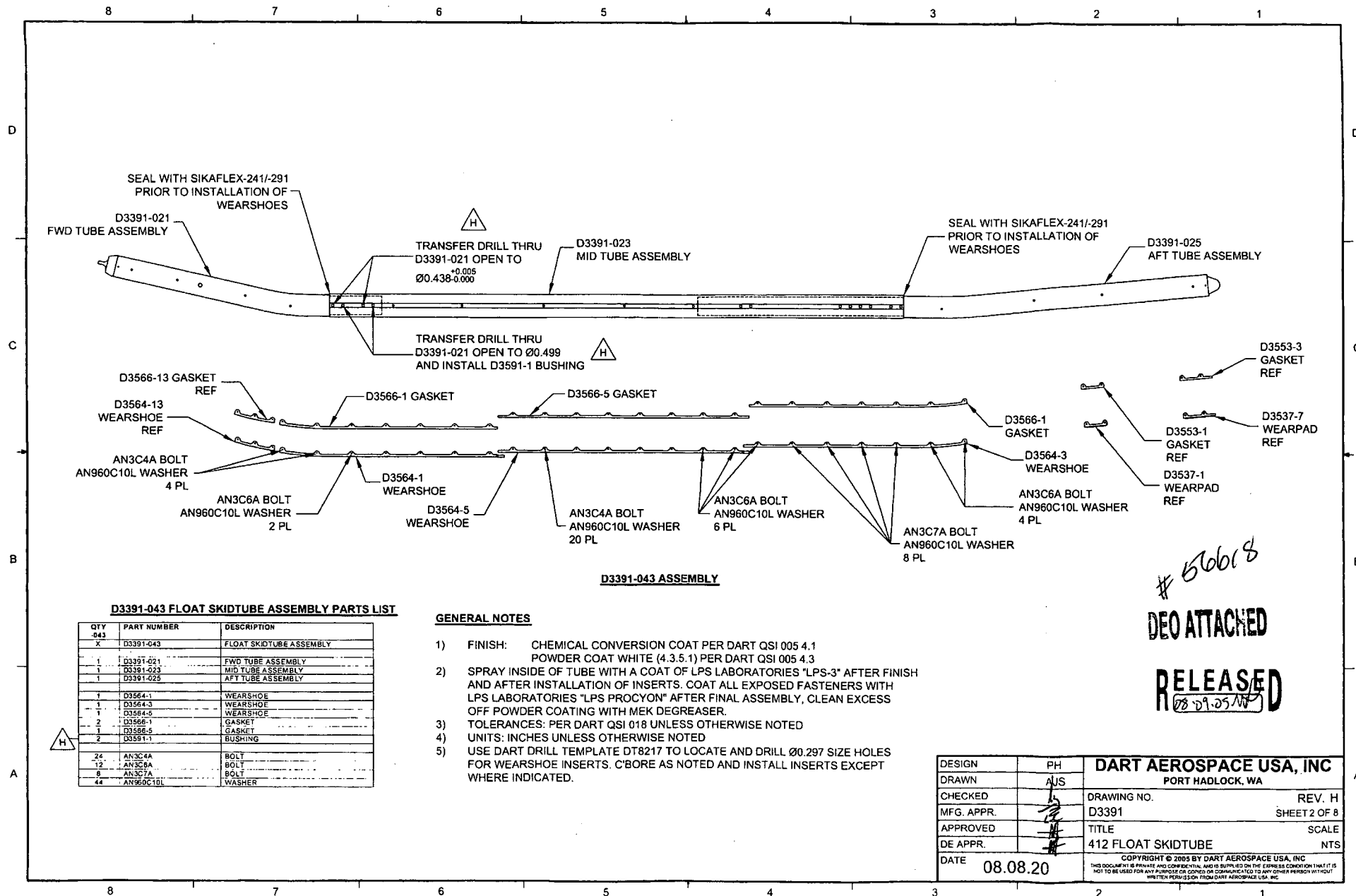
| W/O: | | WORK ORDER CHANGES | | | | | |
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| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries



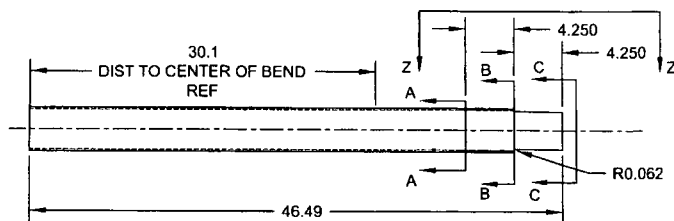
| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

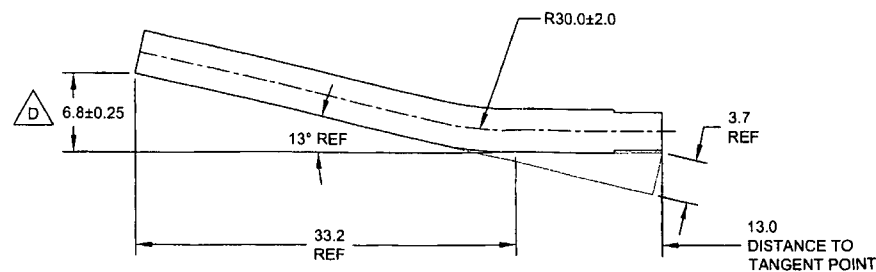
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|--------------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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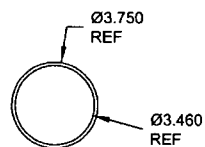
NOTE: Date & initial all entries



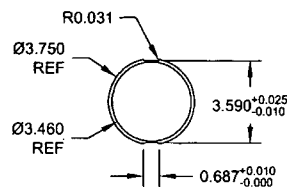
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



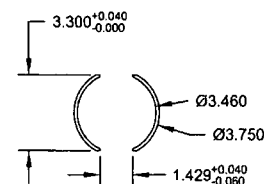
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



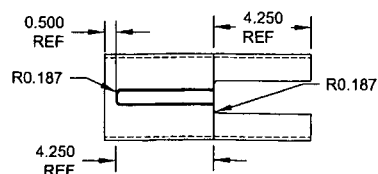
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X



SECTION C-C
SCALE 2X



VIEW Z-Z
SCALE 2X

#34618

DEO ATTACHED
RELEASED
8-3-05 W

| | | | |
|------------|----------|--|--------------|
| DESIGN | PH | DART AEROSPACE USA, INC | |
| DRAWN | AJS | PORT HADLOCK, WA | |
| CHECKED | | DRAWING NO. | REV. H |
| MFG. APPR. | | D3391 | SHEET 3 OF 8 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | 412 FLOAT SKIDTUBE | NTS |
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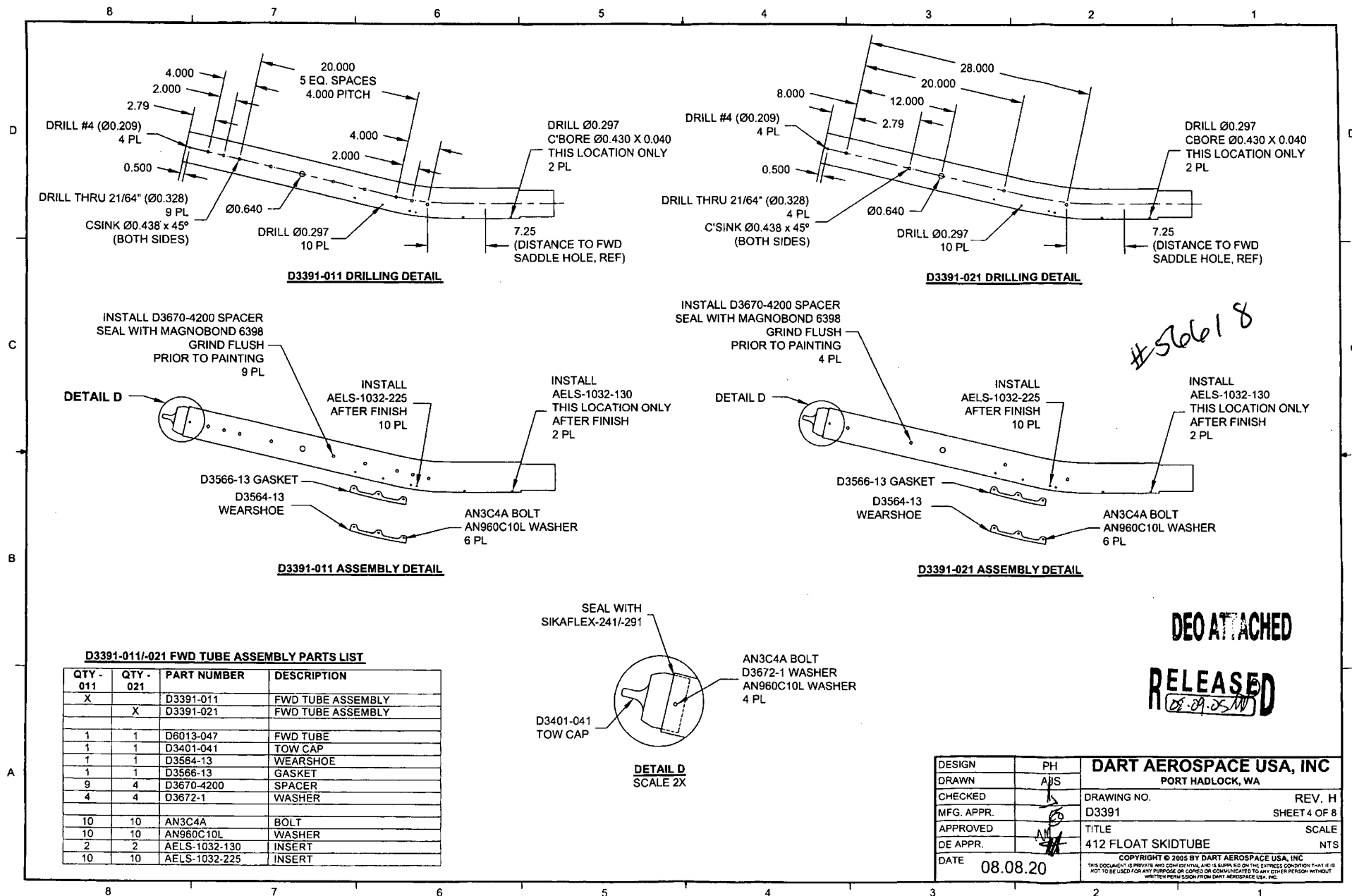
| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries



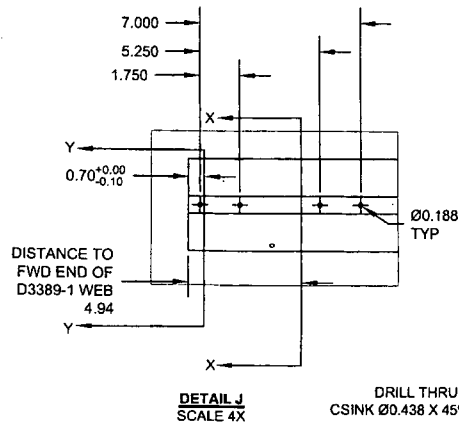
| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

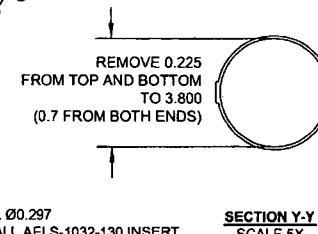
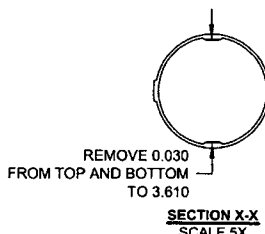
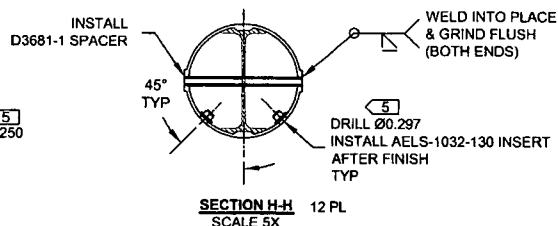
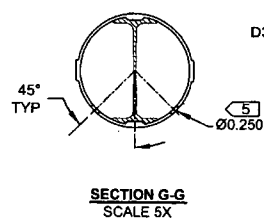
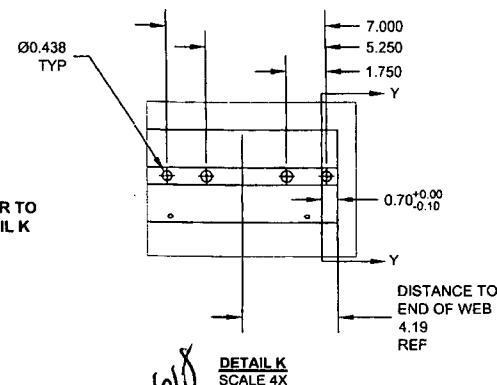
| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries



DRILL THRU 21/64" (Ø0.328)
CSINK Ø0.438 X 45° (BOTH SIDES)
12 PL

D3391-013 ASSEMBLY DETAIL

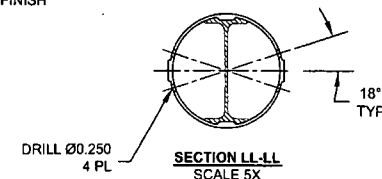
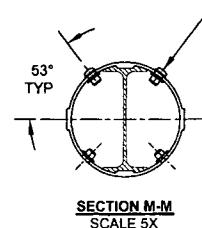
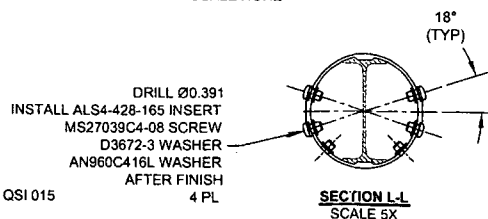
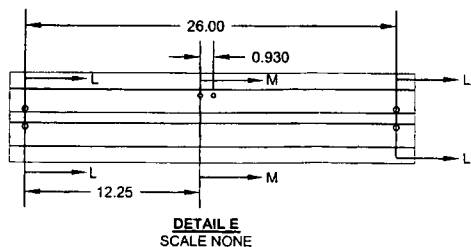


D3391-013 MID TUBE ASSEMBLY PARTS LIST

| QTY -013 | PART NUMBER | DESCRIPTION |
|----------|---------------|-------------------|
| X | D3391-013 | MID TUBE ASSEMBLY |
| 1 | D2500-1-100 | EXTRUSION |
| 1 | D3389-1 | WEB |
| 4 | D3672-1 | WASHER |
| 4 | D3672-3 | WASHER |
| 12 | D3681-1 | SPACER |
| 24 | AELS-1032-130 | INSERT |
| 4 | ALS4-428-165 | INSERT |
| 4 | AN960C10L | WASHER |
| 4 | AN960C416L | WASHER |
| 4 | MS27039C1-09 | SCREW |
| 4 | MS27039C4-08 | SCREW |

D3391-013 MID TUBE ASSEMBLY

- MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-2411/291 PER QSI 015
- WELDING: PER DART QSI 004



DEO ATTACHED **RELEASED**

| | | | |
|------------|----------|--|--------------|
| DESIGN | PH | DART AEROSPACE USA, INC | |
| DRAWN | MS | PORT HADLOCK, WA | |
| CHECKED | | DRAWING NO. | REV. H |
| MFG. APPR. | | D3391 | SHEET 5 OF 8 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | 412 FLOAT SKIDTUBE | NTS |
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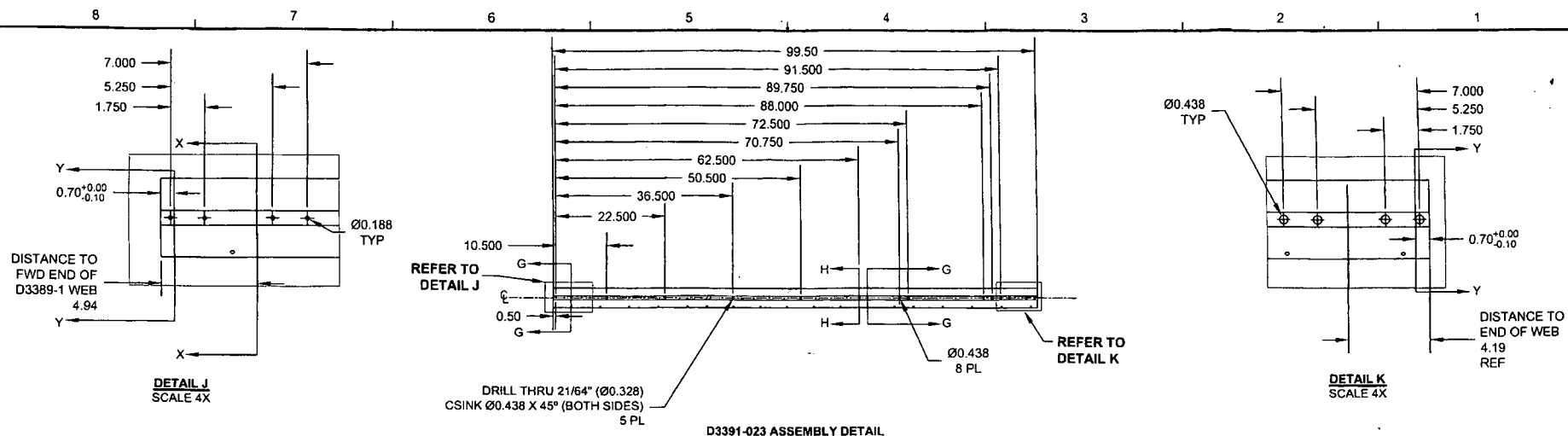
| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

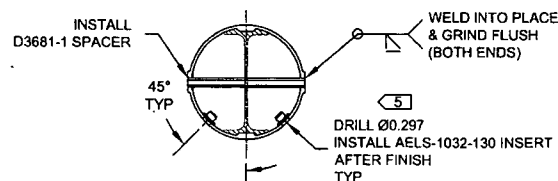
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|--------------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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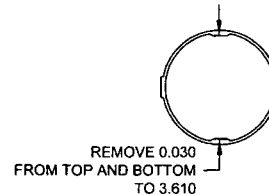
NOTE: Date & initial all entries



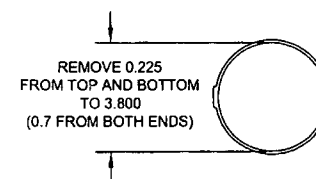
SECTION G-G
SCALE 5X



SECTION H-H
SCALE 5X



SECTION X-X
SCALE 5X



SECTION Y-Y
SCALE 5X

D3391-023 MID TUBE ASSEMBLY PARTS LIST

| QTY - 023 | PART NUMBER | DESCRIPTION |
|-----------|---------------|-------------------|
| X | D3391-023 | MID TUBE ASSEMBLY |
| 1 | D2500-1-100 | EXTRUSION |
| 1 | D3389-1 | WEB |
| 5 | D3681-1 | SPACER |
| 20 | AELS-1032-130 | INSERT |

D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- 3) WELDING: PER DART QSI 004

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|------------|----------|---|--------------|
| DESIGN | PH | DART AEROSPACE USA, INC | |
| DRAWN | AJS | PORT HADLOCK, WA | |
| CHECKED | | DRAWING NO. | REV. H |
| MFG. APPR. | | D3391 | SHEET 6 OF 8 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | 412 FLOAT SKIDTUBE | NTS |
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RELEASED
08-21-05

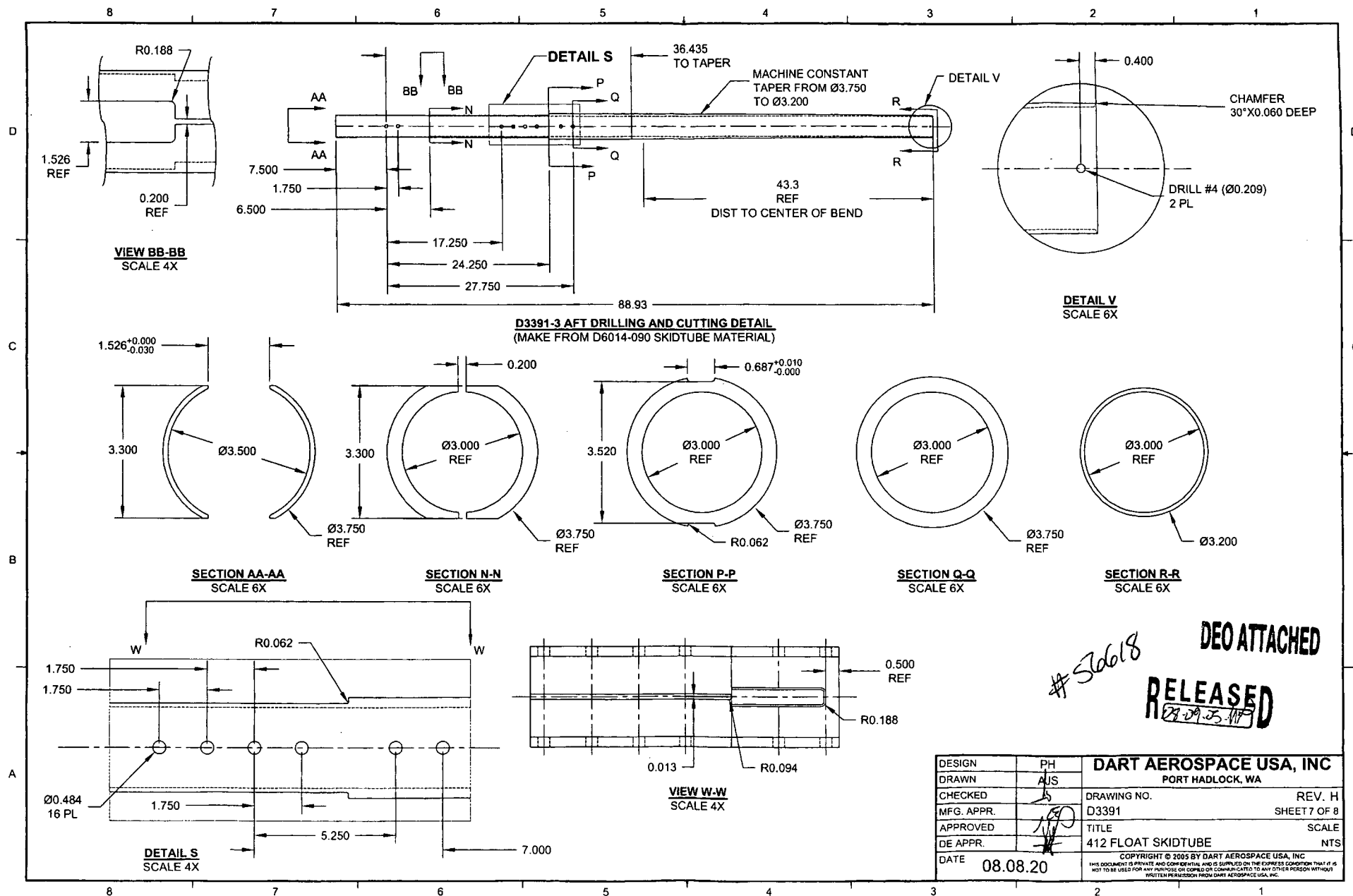
| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries



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RELEASED
28-09-05-117

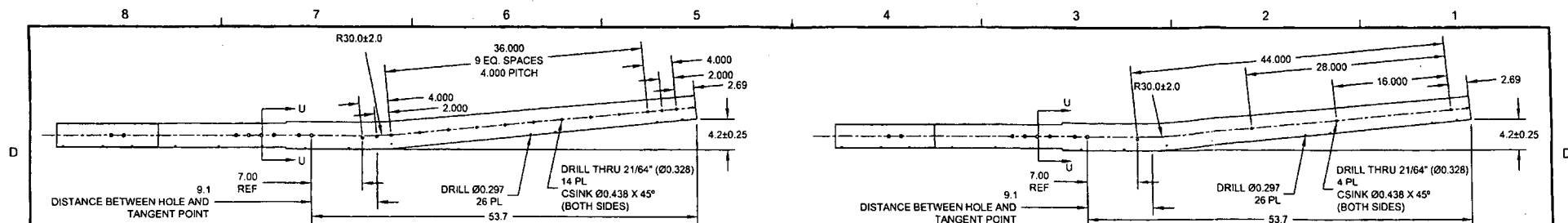
| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

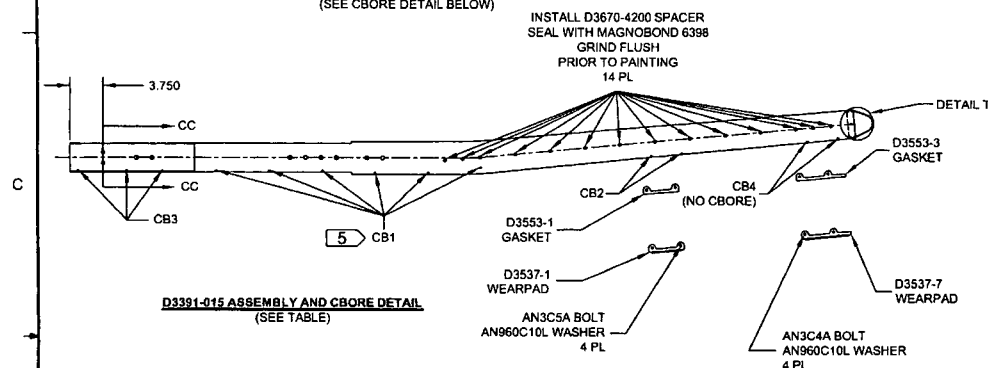
| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

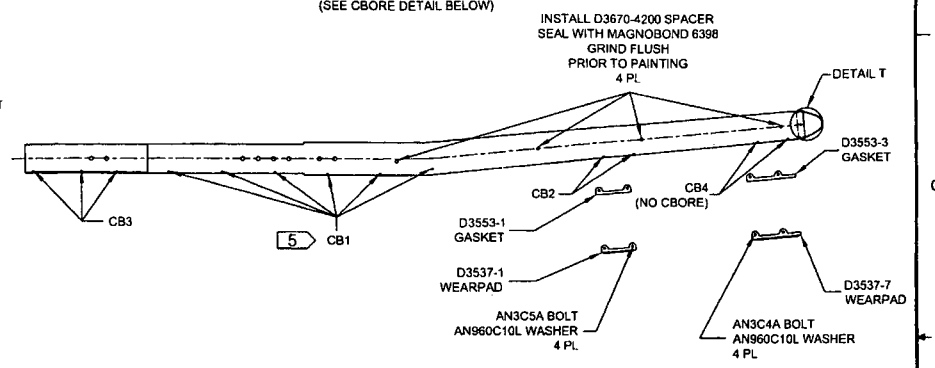


D3391-015 BENDING AND DRILLING DETAIL
(SEE CBORE DETAIL BELOW)

D3391-025 BENDING AND DRILLING DETAIL
(SEE CBORE DETAIL BELOW)



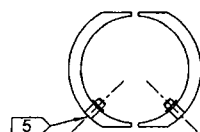
D3391-015 ASSEMBLY AND CBORE DETAIL
(SEE TABLE)



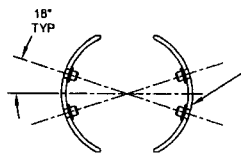
D3391-025 ASSEMBLY AND CBORE DETAIL
(SEE TABLE)

D3391-015/-025 AFT TUBE ASSEMBLY PARTS LIST

| QTY - 015 | QTY - 025 | PART NUMBER | DESCRIPTION |
|-----------|-----------|---------------|-------------------|
| X | X | D3391-015 | AFT TUBE ASSEMBLY |
| | X | D3391-025 | AFT TUBE ASSEMBLY |
| 1 | 1 | D6014-090 | AFT TUBE |
| 1 | 1 | D2646 | AFT CAP |
| 1 | 1 | D3537-1 | WEARPAD |
| 1 | 1 | D3537-7 | WEARPAD |
| 1 | 1 | D3553-1 | GASKET |
| 1 | 1 | D3553-3 | GASKET |
| 14 | 4 | D3670-4200 | SPACER |
| 2 | 2 | D3672-1 | WASHER |
| 14 | 14 | AELS-1032-130 | INSERT |
| 12 | 12 | AELS-1032-225 | INSERT |
| 4 | 4 | ALS4-428-165 | INSERT |
| 6 | 6 | AN3C4A | BOLT |
| 4 | 4 | AN3C5A | BOLT |
| 10 | 10 | AN960C10L | WASHER |

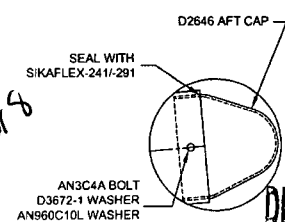


SECTION U-U
SCALE 3X



SECTION CC-CC
SCALE 3X

DRILL Ø0.391
CBORE Ø0.516 X 0.040 DEEP
INSTALL ALS4-428-165 INSERT
4 PL



DETAIL T
SCALE 4X

CBORE HOLES MARKED CB1-CB4 AS FOLLOWS AND
INSTALL AELS-1032-XXX AFTER FINISH AS NOTED

| HOLES MARKED | QTY D3391-015 | QTY D3391-025 | CBORE | P/N |
|--------------|---------------|---------------|----------------|---------------|
| CB1 | 12 | 12 | Ø0.430 X 0.170 | AELS-1032-225 |
| CB2 | 4 | 4 | Ø0.430 X 0.170 | AELS-1032-130 |
| CB3 | 6 | 6 | Ø0.430 X 0.040 | AELS-1032-130 |
| CB4 | 4 | 4 | NONE | AELS-1032-130 |

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|------------|----------|---|--------------|
| DESIGN | PH | DART AEROSPACE USA, INC | |
| DRAWN | AJS | PORT HADLOCK, WA | |
| CHECKED | | DRAWING NO. | REV. H |
| MFG. APPR. | | D3391 | SHEET 8 OF 8 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | 412 FLOAT SKIDTUBE | NTS |
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RELEASED
08-09-05/10

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

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|----------------------|-----------------------------|-------------------------|--|--|-------------------------|---------------------------|--------------|
| DRAWING NO. D3391 | TITLE 412 FLOAT SKIDTUBE | REV. H | DART AEROSPACE USA, INC ENGINEERING ORDER | | D.E.O. NO. D3391-H-1 | SHEET NO. SHEET 1 OF 1 | SCALE NTS |
| DRAWN <i>UP</i> | CHECKED <i>L</i> | MFG. APPR. <i>AA</i> | APPROVED <i>MP</i> | | DE APPR. <i>#</i> | | |
| DATE 09.09.23 | DATE <i>06.04.24</i> | DATE <i>09/09/25</i> | DATE <i>09/09/30</i> | | DATE <i>09/09/30</i> | | |

PURPOSE:

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF D3391-041/-043 SKIDTUBES.

CHANGE:

AMEND NOTE 2 OF D3391-041/-043 SKIDTUBE ASSEMBLIES (ZN A6-1, A6-2) AS FOLLOWS:

- 2) ~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH~~
~~AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH~~
 LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS
 OFF POWDER COATING WITH MEK DEGREASER.

RELEASED
 2010-02-02

MP

#56618

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| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

NO. 224

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barday Elliott
Job number: 53938
Part number: D3391-023
Description: Hot Mid tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminum
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier [Signature] Date of Test Coupon 10-02-18

Welder [Signature] Date of Test Coupon 10-02-18

The above named individual is qualified in accordance with AWS D17.1.2001 to weld